

What is claimed is:

1. A rail test simulator system for training an operator comprising:

5 a rail test data recorder for obtaining obtained rail test data, the rail test data recorder including:

a visual image recording portion for recording obtained visual data, the obtained visual data representing a plurality of visual images; and

10 a data recording portion for recording a plurality of obtained track data, the obtained track data representing a condition of a track), the obtained rail test data including the obtained visual data and the obtained track data; and

a rail inspection simulator that simulates a track inspection, the rail inspection simulator including:

a visual image generation portion that generates generated visual images based on the obtained visual data;

15 a track data generation portion that generates generated track data based on the obtained track data; and

a controller that inputs the obtained rail test data from the rail test data recorder from the rail test data recorder, the controller providing the obtained visual data to the visual image generation portion and the obtained track data to the track data generation portion, the controller including:

20 an operator interface portion, the operator interface portion accepting operator input from an operator, the controller providing the obtained rail test data to the visual image generation portion and the obtained track data to the track data generation portion based on the operator input.

25 2. The rail test simulator system according to claim 1, wherein the controller synchronizes the visual image generation portion and the track data generation portion such that generation of the generated visual images and generation of the generated track data is synchronized.

3. The rail test simulator system according to claim 2, wherein the visual image generation portion and the track data generation portion generate the generated visual images and the generated track data from the obtained visual data and the obtained track data tagged with unique identification numbers, the controller synchronizing the visual image generation  
5 portion and the track data generation portion by referencing the unique identification numbers.
4. The rail test simulator system according to claim 1, wherein the data recording portion records the obtained track data during an actual rail inspection during travel over a rail.
- 10 5. The rail test simulator system according to claim 1, wherein the data recording portion records the obtained track data from data generation simulation.
6. The rail test simulator system according to claim 1, wherein the data recording portion records at least one of ultrasonic rail test data and induction rail test data.
7. The rail test simulator system according to claim 1, wherein the visual image  
15 recording portion is a digital image recorder.
8. The rail test simulator system according to claim 1, wherein the rail inspection simulator further includes an instructor portion, the instructor portion including:
- An instructor control portion; and
- An instructor monitoring portion.
- 20 9. The rail test simulator system according to claim 1, wherein the rail inspection simulator includes an instructor monitoring portion, the instructor monitoring portion monitors the generated visual images, generated track data and operator input.
10. The rail test simulator system according to claim 7, wherein the instructor control portion accepts instructor input, the instructor control portion providing the instructor  
25 input to the controller, wherein the controller provides the obtained visual data to the visual image generation portion and the obtained track data to the track data generation portion based on the instructor input.